A UNITED STATES DEPARTMENT OF COMMERCE PUBLICATION

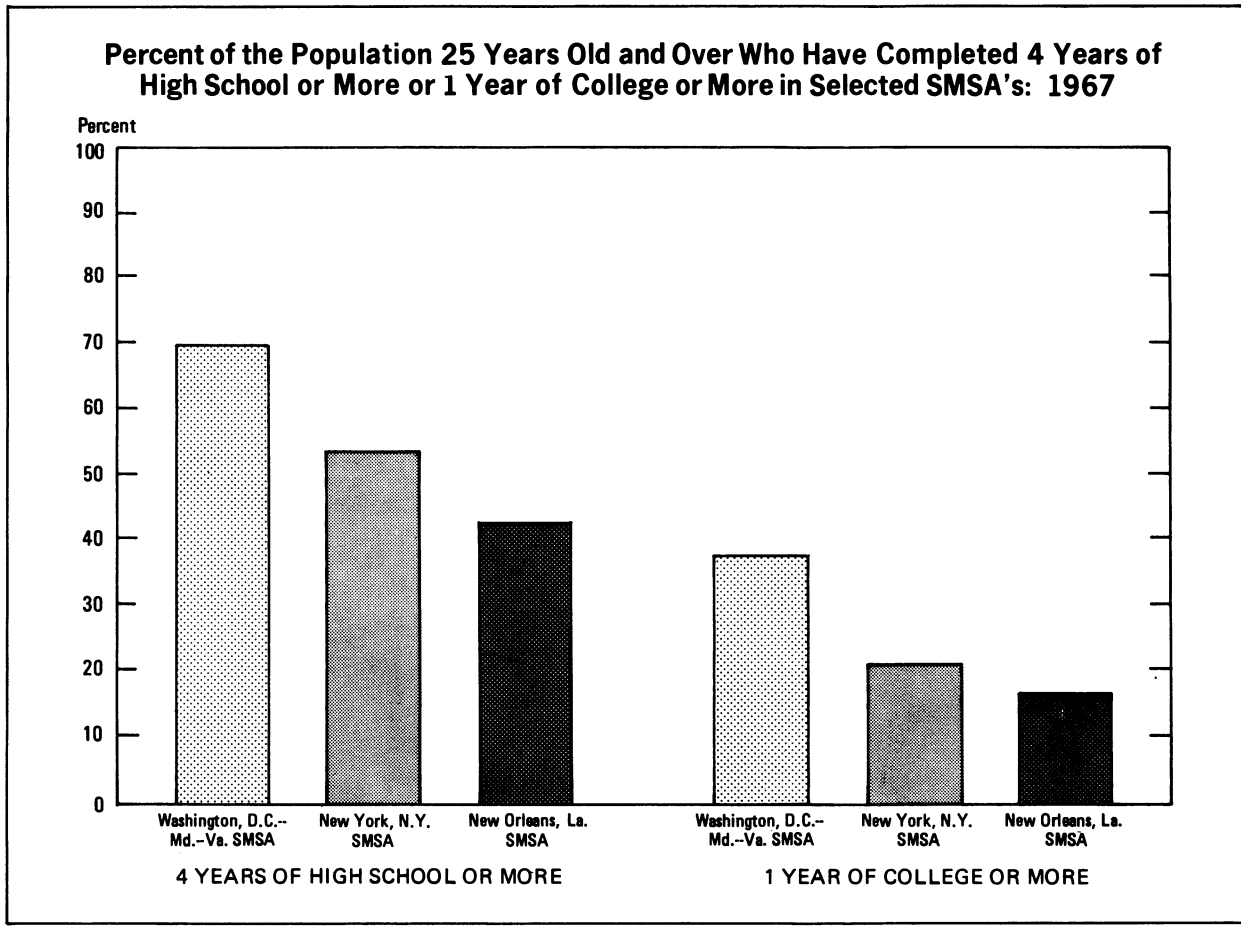
CURRENT POPULATION REPORTS

Population Characteristics

Series P-20, No. 209
January 8, 1971

U.S. DEPARTMENT OF COMMERCE / Bureau of the Census

EDUCATIONAL ATTAINMENT IN 30 SELECTED STANDARD METROPOLITAN STATISTICAL AREAS: 1967



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Educational Attainment in 30 Selected Standard Metropolitan Statistical Areas: 1967

Persons living in the central cities of 30 of the Nation's large standard metropolitan statistical areas (SMSA's) in 1967 had, on the average, completed fewer years of schooling than persons living in the suburban parts of these metropolitan areas. About half of the persons 25 years old and over living in these cities had not completed high school as compared with only 37 percent of those living in the suburban ring around these central cities.

The data in this report on the educational attainment of the population 25 years old and over in each of these SMSA's are based on the annual average of the 1967 monthly statistics on years of school completed collected in the Current Population Survey conducted by the Bureau of the Census in 1967. The tabulation of these data was sponsored by Columbia University.

A part of the difference in the educational attainment of persons living inside and those living outside the central cities of these SMSA's is attributable to the fact that a smaller proportion of whites than of Negroes and persons of other races live in the central cities and that persons of Negro and other races have a lower educational attainment than whites. About 82 percent of the persons of Negro and other races living in these metropolitan areas in 1967 lived in the central cities as compared with 43 percent of the whites, and around 62 percent of the persons of Negro and other races 25 years old and over living in these central cities were not high school graduates, as compared with only 47 percent of the whites.

For both whites and persons of Negro and other races living in these 30 SMSA's those who had completed 4 years of college or more were less likely to live in the central cities than were those with a lower level of educational attainment. About 37 percent of the whites and 76 percent of the Negroes and other races who had completed 4 years of college or more lived in the central cities as compared with 44 percent of the whites and 83 percent of the Negroes and other races who had not completed this much education.

The Washington, D.C., SMSA was exceptional in that the population had a relatively high level of educational attainment and yet the proportion Negro was about twice as high as in the other SMSA's. About one in four of the adults 25 years old and over in the Washington, D.C., SMSA had completed 4 years of college or more, 14 percent had completed 1 to 3 years of college, 32 percent had completed exactly 4 years of high school, and a similar percentage had completed less than a high school education.

The population of the New York SMSA (the Nation's largest) did not have as high an educational attainment level as that of the Washington SMSA. Only 12 percent of the New York adults had completed 4 years of college or more as compared with 23 percent of the Washington adults, and about half (47 percent) of the New York adults were not high school graduates as compared with 31 percent of the Washington adults with this limited education.

The population of the New Orleans SMSA had a relatively low level of educational attainment. About 6 out of every 10 of the New Orleans adults were not high school graduates, and only 8 percent had completed 4 years of college or more.

RELATED REPORTS

Data on educational attainment for persons 14 years old and over in March 1959, 1962, 1964, 1965 and 1966, 1967 and 1968, and 1969 were published in Current Population Reports, Series P-20, Nos. 99, 121, 138, 158, 169, 182, and 194, respectively. Data on the age, sex, and color composition of the population of all standard metropolitan statistical areas of the United States for 1960 to 1966 were presented in Current Population Reports, Series P-20, No. 163. Comparable statistics with components of change for 1960 to 1969 were published in the same series in report No. 197.

Statistics on educational attainment of the Negro population in 1967 are presented in Current Population Reports, Series P-20, No. 175. Further information on educational attainment is presented in "Educational Change in a Generation: March 1962," Series P-20, No. 132. In addition, educational attainment as determined in the Current Population Survey is related to labor force characteristics in publications of the Bureau of Labor Statistics, as in "Educational Attainment of Workers, March 1967," published in the February 1968 issue of Monthly Labor Review. Statistics

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on educational attainment are also available in several reports of the 1960 Census of Population, the most relevant of which is PC(2)-5B, Educational Attainment. Volume I, Characteristics of the Population, chapter C, "General Social and Economic Characteristics," and chapter D, "Detailed Characteristics," also include statistics on educational attainment. Report PC(2)-1C, Nonwhite Population by Race, includes educational data for selected races.

Apart from the different dates at which the statistics were collected, the education data from the 1967 Current Population Survey may differ from those from the 1960 census and from projections based on the census for the following reasons: (1) Members of the Armed Forces and inmates of institutions are excluded from the survey. All members of the Armed Forces in the United States and inmates of institutions are included in the census data. (2) Statistics from both the census and the CPS are subject to sampling and response errors. There are differences in coverage, enumeration techniques (self-enumeration versus direct enumeration), and the methods of allocating nonresponses.

The Content Evaluation Study of the 1960 census is a major source of information about the accuracy of census data on educational attainment. A comparison by detailed categories of years of school reported for each level suggests a net overreporting on years of school completed for about 6 percent of the population 25 years old and over.[1] A comparison of CPS with 1960 census figures shows that the CPS figures include more persons with 12 years or more of school completed and fewer with less than 12 years. If the Content Evaluation Study is taken as a standard, the 1960 census figures on educational attainment show a slight upward bias. The CPS figures are still higher than the census figures and may, therefore, be more biased in the direction of high educational attainment.

Because of the differences mentioned above, care should be exercised in comparing the data for 1967 with those from the 1960 census.

DEFINITIONS AND EXPLANATIONS

Population coverage. The figures in this report for 1967 are sample survey data and relate to the civilian noninstitutional population.

Age. The age classification is based on the age of the person at his last birthday.

Race. The term "race" in this report refers to the division of population into two groups, white and Negro and other races. The group designated as "other races" consists of Indians, Japanese, Chinese, and any other race except white and Negro.

Years of school completed. Data on years of school completed in this report were derived from the combination of answers to two questions: (a) "What is the highest grade of school he has ever attended?" and (b) "Did he finish this grade?"

The questions on educational attainment apply only to progress in "regular" schools. Such schools include graded public, private, and parochial elementary and high schools (both junior and senior high), colleges, universities, and professional schools, whether day schools or night schools. Thus, regular schooling is that which may advance a person toward an elementary school certificate or high school diploma, or a college, university, or professional school degree. Schooling in other than regular schools were counted only if the credits obtained were regarded as transferable to a school in the regular school system.

The median years of school completed is defined as the value which divides the population into two equal parts--one-half having completed more schooling and one-half having completed less schooling than the median. This median was computed after the statistics on years of school completed had been converted to a continuous series of numbers (e.g., completion of the first year of high school was treated as completion of the 9th year and the completion of the first year of college as completion of the 13th year). The persons completing a given school year were assumed to be distributed evenly within the interval from .0 to .9 of the year (for example, persons completing the 12th year were assumed to be distributed evenly between 12.0 and 12.9). In fact, at the time of a March survey, most of the enrolled persons had completed about three-fourths of a school year beyond the highest grade completed, whereas a large majority of persons who were not enrolled had not attended any part of a grade beyond the highest one completed. The effect of the assumption is to place the median for younger persons slightly below, and for older persons slightly above, the true median. Because of the inexact assumption as to the distribution within an interval, this median is more appropriately used for comparing groups and the same group at different dates than as an absolute measure of educational attainment.

Assignment of educational attainment for those not reporting. When information on either the highest grade attended or completion of the grade was not reported in the survey, entries for the items

[1] Evaluation and Research Program of the U.S. Censuses of Population and Housing, 1960: Accuracy of Data on Population Characteristics as Measured by Reinterviews, Series ER 60, No. 4, table 12.

were assigned using an edit in the computer. The general procedure was to assign an entry for a person that was consistent with entries for other persons with similar characteristics. The specific technique used in the 1967 survey was as follows:

1. The computer stored reported data on highest grade attended by color and age, and on completion of the grade by age and highest grade attended, for person 14 years old and over in the population.

2. Each stored value was retained in the computer only until a succeeding person having the same characteristics (e.g., same color and age, in the case of assignments for highest grade attended) and having the item reported, was processed through the computer. Then the reported data for the succeeding person were stored in place of the one previously stored.

3. When one or both of the education items for a person 14 years old and over was not reported, the entry assigned to this person was that stored for the last person who had the same characteristics.

Metropolitan-nonmetropolitan residence. The population residing in standard metropolitan statistical areas (SMSA's) constitutes the metropolitan population. Except in New England, an SMSA is a county or group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county, or counties, containing such a city or cities, contiguous counties are included in an SMSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city. In New England, SMSA's consist of towns and cities, rather than counties. The metropolitan population in this report is based on SMSA's as defined in the 1960 census and does not include any subsequent additions or changes.

The population inside SMSA's is further classified as "in central cities" and "outside central cities." With a few exceptions, central cities are determined according to the following criteria:

1. The largest city in an SMSA is always a central city.

2. One or two additional cities may be secondary central cities on the basis and in the order of the following criteria:

   a. The additional city or cities have at least 250,000 inhabitants.

   b. The additional city or cities have a population of one-third or more of that of the largest city and a minimum population of 25,000.

Thirty selected SMSA's. The 30 selected SMSA's shown in this report are: Atlanta, Ga., Baltimore, Md., Boston, Mass., Buffalo, N.Y., Chicago, Ill., Cincinnati, Ohio-Ky., Cleveland, Ohio, Columbus, Ohio, Dallas, Tex., Denver, Colo., Detroit, Mich., Houston, Tex., Indianapolis, Ind., Kansas City, Mo.-Kans., Los Angeles-Long Beach, Calif., Memphis, Tenn., Milwaukee, Wis., Minneapolis-St. Paul, Minn., New Orleans, La., New York, N.Y., Newark, N.J., Philadelphia, Pa.-N.J., Phoenix, Ariz., Pittsburgh, Pa., St. Louis, Mo.-Ill., San Antonio, Tex., San Diego, Calif., San Francisco-Oakland, Calif., Seattle, Wash., Washington, D.C.-Md.-Va.

Data for the 30 SMSA's shown in this report were tabulated at the request of, and with financing by, Conservation of Human Resources, Columbia University, as part of a larger study of employment patterns in metropolitan cities.

SOURCE AND RELIABILITY OF THE ESTIMATES

Source of data. The estimated percentages shown in this report are based on an annual average of 1967 monthly data from a subset (i.e., 30 selected standard metropolitan statistical areas) of the Current Population Survey of the Bureau of the Census. The national sample is spread over 449 areas comprising 863 counties and independent cities with coverage in each of the 50 States and the District of Columbia. Approximately 50,000 households are designated for interview each month. Of this number, 2,250 occupied units, on the average, are visited but interviews are not obtained because the occupants are not found at home after repeated calls, or are unavailable for some other reason. In addition to the 50,000 there are also about 8,500 sample units in an average month which are visited but are found to be vacant or otherwise not to be interviewed.

The estimating procedure used in this survey involved the inflation of the weighted sample results to independent estimates of the civilian noninstitutional population of the United States by age, race, and sex. These independent estimates were based on statistics from the 1960 Census of Population; statistics of birth, deaths, immigration, and emigration; and statistics on the strength of the Armed Forces.

Reliability of the estimates. Since the estimates are based on a sample, they may differ somewhat from figures obtained if a complete census had

been taken using the same schedules, instructions, and enumerators. As in any survey work, the results are subject to errors of response and of reporting as well as being subject to sampling variability.

The standard error is primarily a measure of sampling variability, that is, of the variations that occur by chance because a sample rather than the whole of the population is surveyed. As calculated for this report, the standard error also partially measures the effect of response and enumeration errors but does not measure any systematic biases in the data. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census figure by less than the standard error. The chances are about 95 out of 100 that the difference would be less than twice the standard error.

The reliability of an estimated percentage, computed by using sample data for both numerator and denominator, depends upon both the size of the percentage and the size of the total upon which the percentage is based. Estimated percentages are relatively more reliable than the corresponding estimates of the numerators of the percentages, particularly if the percentages are 50 percent or more. Table A contains the standard errors of estimated percentages. Table B contains the base numbers of the percentages to be used in conjunction with table A.

Illustration of use of table of standard errors. This report shows that in 1967, 30.0 percent of total persons 25 years old and over in the Houston SMSA finished four years of high school. Table B shows that in the Houston SMSA there were 800,000 total persons 25 years old and over in 1967. Table A shows the standard error of 30.0 percent on a base of 800,000 to be approximately 0.72 percent. Consequently, chances are 68 out of 100 that the estimated 30.0 percent would be within 0.72 percentage points of a complete census figure, and chances are 95 out of 100 that the estimate would be within 1.44 percentage points of a census figure; i.e., this 95 percent confidence interval would be from 28.56 to 31.44 percent.

Table A.--STANDARD ERRORS FOR ESTIMATED PERCENTAGES IN 30 SELECTED SMSA'S

(68 chances out of 100)

Estimated percentage of persons	Base of percentage (thousands)									
	50	100	250	500	1,000	2,000	5,000	10,000	15,000	20,000
2 or 98	0.41	0.31	0.21	0.14	0.10	0.07	0.04	0.03	0.02	0.02
5 or 95	0.93	0.79	0.44	0.30	0.20	0.2	0.1	0.07	0.05	0.05
10 or 90	1.7	1.3	0.79	0.52	0.39	0.3	0.2	0.1	0.1	0.09
25 or 75	2.8	2.0	1.3	0.81	0.59	0.4	0.3	0.2	0.1	0.1
50	3.7	2.5	1.6	1.2	0.74	0.5	0.4	0.3	0.2	0.2

Table B. Approximate Population Bases, by Race, for 30 Selected Standard Metropolitan Statistical Areas, for the Computation of Standard Errors: 1967

(In thousands. Civilian noninstitutional population)

Area and race	Total, 25 years old and over
30 SELECTED SMSA'S	
Total	39,000
White	34,100
Negro and other races	4,900
In central cities	18,900
White	14,800
Negro and other races	4,100
Outside central cities	20,100
White	19,300
Negro and other races	900
ATLANTA, GA., SMSA	
Total	700
White	500
Negro and other races	100
In central city	200
White	100
Outside central city	400
White	400
BALTIMORE, MD., SMSA	
Total	1,000
White	700
Negro and other races	300
In central city	500
White	300
Negro and other races	200
Outside central city	500
White	500
BOSTON, MASS., SMSA	
Total	1,400
White	1,400
In central city	300
White	300
Outside central city	1,100
White	1,100
BUFFALO, N.Y., SMSA	
Total	700
White	700
In central city	300
White	200
Outside central city	500
White	500
CHICAGO, ILL., SMSA	
Total	3,600
White	3,100
Negro and other races	500
In central city	1,900
White	1,400
Negro and other races	500
Outside central city	1,700
White	1,700
CINCINNATI, OHIO-KY., SMSA	
Total	600
White	500
In central city	300
White	200
Outside central city	300
White	300
CLEVELAND, OHIO, SMSA	
Total	1,000
White	900
Negro and other races	100
In central city	400
White	300
Negro and other races	100
Outside central city	700
White	600
COLUMBUS, OHIO, SMSA	
Total	400
White	300
In central city	300
White	200
Outside central city	100
White	100
DALLAS, TEX., SMSA	
Total	700
White	600
In central city	400
White	400
Outside central city	300
White	200
DENVER, COLO., SMSA	
Total	600
White	500
In central city	300
White	200
Outside central city	300
White	300
DETROIT, MICH., SMSA	
Total	2,100
White	1,800
Negro and other races	300
In central city	900
White	600
Negro and other races	300
Outside central city	1,200
White	1,200

Table B. Approximate Population Bases, by Race, for 30 Selected Standard Metropolitan Statistical Areas, for the Computation of Standard Errors: 1967--Continued

(In thousands. Civilian noninstitutional population)

Area and race	Total, 25 years old and over
HOUSTON, TEX., SMSA	
Total	800
White	600
Negro and other races	200
In central city	600
White	500
Negro and other races	200
Outside central city	200
White	200
INDIANAPOLIS, IND., SMSA	
Total	400
White	300
In central city	300
White	200
Outside central city	100
White	100
KANSAS CITY, MO.-KANS., SMSA	
Total	600
White	600
In central city	300
White	300
Outside central city	300
White	300
LOS ANGELES-LONG BEACH, CALIF., SMSA	
Total	4,400
White	4,000
Negro and other races	400
In central cities	1,700
White	1,400
Negro and other races	300
Outside central cities	2,600
White	2,500
Negro and other races	100
MEMPHIS, TENN., SMSA	
Total	300
White	200
In central city	300
White	200
MILWAUKEE, WIS., SMSA	
Total	700
White	600
In central city	400
White	300
Outside central city	300
White	300
MINNEAPOLIS-ST. PAUL, MINN., SMSA	
Total	800
White	800
In central cities	400
White	400
Outside central cities	400
White	400
NEW ORLEANS, LA., SMSA	
Total	500
White	300
Negro and other races	200
In central city	300
White	200
Negro	100
Outside central city	200
White	100
NEW YORK, N.Y., SMSA	
Total	6,600
White	5,800
Negro and other races	800
In central city	4,600
White	4,000
Negro and other races	700
Outside central city	2,000
White	1,900
NEWARK, N.J., SMSA	
Total	1,100
White	900
Negro and other races	100
In central city	200
White	100
Outside central city	800
White	800
PHILADELPHIA, PA.-N.J., SMSA	
Total	2,500
White	2,100
Negro and other races	400
In central city	1,200
White	900
Negro and other races	300
Outside central city	1,400
White	1,300
PHOENIX, ARIZ., SMSA	
Total	400
White	400
In central city	300
White	300
Outside central city	100
White	100

Table B. Approximate Population Bases, by Race, for 30 Selected Standard Metropolitan Statistical Areas, for the Computation of Standard Errors: 1967--Continued

(In thousands. Civilian noninstitutional population)

Area and race	Total, 25 years old and over
PITTSBURGH, PA., SMSA	
Total	1,400
White	1,300
In central city	300
White	200
Outside central city	1,100
White	1,000
ST. LOUIS, MO.-ILL., SMSA	
Total	1,200
White	1,000
Negro and other races	200
In central city	400
White	200
Negro and other races	100
Outside central city	800
White	800
SAN ANTONIO, TEX., SMSA	
Total	400
White	300
In central city	300
White	300
SAN DIEGO, CALIF., SMSA	
Total	500
White	500
In central city	300
White	200
Outside central city	300
White	300

Area and race	Total, 25 years old and over
SAN FRANCISCO-OAKLAND, CALIF., SMSA	
Total	1,700
White	1,500
Negro and other races	200
In central cities	600
White	400
Negro and other races	200
Outside central cities	1,100
White	1,000
SEATTLE, WASH., SMSA	
Total	700
White	600
In central city	300
White	300
Outside central city	400
White	400
WASHINGTON, D.C.-MD.-VA., SMSA	
Total	1,200
White	1,000
Negro and other races	300
In central city	400
White	200
Negro and other races	200
Outside central city	900
White	800